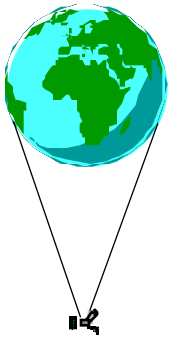
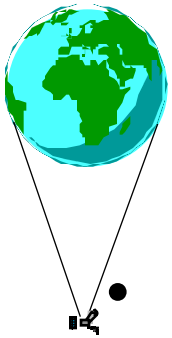


Small Business Innovation Research & Small Business Technology Transfer Programs

Dr. James E. Kalshoven

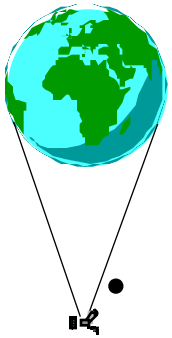
GSFC Code 710

301-286-8506



1999 SBIR/STTR Program Schedule

- Program Solicitations
  - SBIR *(STTR)* Opening: 4/24/99 *(3/2/99)*
  - SBIR *(STTR)* Closing : 7/07/99 *(5/14/99)*
  - SBIR *(STTR)* Selections: 10/22/99 *(8/16/99)*
- Anticipate approximately 335 *(30)* Phase I selections
- Approximately 40% of the Phase I projects are down-selected for Phase II



NASA SBIR & STTR Homepage: http://sbir.nasa.gov

- Online Solicitations - Key Word Searchable
- Press Releases - Recent NASA Selections
- Searchable Abstracts of Winning Proposals
- Procurement Information - including Model Contracts
- NASA SBIR/STTR Planning Dates
- SBIR Success Stories
- SBIR Mall - Links Phase II Company's Homepages
- Links to SBIR Service Organizations
- Link to NASA's Technology Transfer Network

NASA SBIR and STTR - small business.technology.solicitations.awards.abstracts.innovation.cyber-stall. - Netscape

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small business innovation research
small business technology transfer

SBIR
STTR

What's New?

Solicitations

The SBIR 1998 Phase I Solicitation has been released and while the solicitation period has closed, you can get ready for next year's by examining it in detail. This is an excellent way to prepare yourself in advance. And for those firms interested in the STTR program, don't forget to look at this year's STTR Phase I solicitation as well to jump-start your efforts for next year.

Don't forget that when your project is successful, you will need to complete a New Technology report.

Awards

Award List for 1998 STTR Phase I has been released as of August 17, 1998.

Award List for 1997 SBIR Phase I has been released as of February 12, 1998.

Award List for 1996 SBIR Phase II has been released as of December 10, 1997.

Award list for STTR 96 Phase II released as of October 8, 1997.

Award List for 1997 STTR Phase I is released as of July 14,1997.

What's Inside

Info Central	All paths lead to Info Central, providing information vital to participating in the program: solicitations; schedule; awards; program info; assistance; abstracts; successes; sbir mail
Site Map	Quickly find a specific page using our complete map.
Site Search	Search the entire site for a specific keyword or phrase
Newsletter	Brief current news from NASA's SBIR/STTR program.
Feedback	If you have a question or comment use this handy form.
Exit	Leave our site and travel to NASA's main commercialization site.

Net Minder

As a service to our visitors, you can now register for automatic e-mail notices* of updates to the NASA SBIR/STTR site by entering your e-mail address below.

Register

Note that the form will ask for verification of your email address, request some **optional** basic demographic information and information about how you wish to receive the notices. The demographic information is not required to make the system function (ie., deliever email notices to your mailbox). *If there are questions about this service please contact NetMind.

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NASA STTR 1998 Program Solicitation - Netscape
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Bookmarks Location: http://sbir.gsfc.nasa.gov/SBIR/STTR/sttr98/phase1/solicitation/index.html
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small business technology transfer
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NASA
NASA
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1998 SBIR Subtopic for Balloons and POC's

19.11 Balloon Vehicles & Aerobots

Lead Center: GSFC

Innovations in materials structures and systems concepts have enabled lighter than air vehicles to play an expanding role in NASA's space and earth science programs. Smaller robotic balloons, known as Planetary Aerobots will carry scientific payloads into the atmosphere of Mars, Venus, Titan and the outer planets in order to investigate their atmospheres in situ and their surfaces from close proximity. Their envelopes will be subject to extreme environments and must support missions with a range of durations. Miniature balloons capable of long duration flight also are emerging as an important tool in terrestrial climate investigations and weather prediction. Such balloons also have potential commercial significance for communications. A new generation of stratospheric balloons based on advanced balloon envelope technologies will be able to deliver large balloon craft and payloads of several 1000 Kg to above 99.9% of the Earth's absorbing atmosphere and maintain them there for months of continuous observation. The Ultra Long Duration Balloon (ULDB) with volumes up to 1 million cubic meters must survive a demanding set of environmental conditions beginning with the fabrication of the material and balloon through launch, ascent and float. NASA is seeking innovative and cost effective solutions in support of this development activity in the following areas (proposers should specify the size range of vehicles to which their technologies apply):

- High strength to weight composite envelope materials suitable for fabrication into balloon vehicles.
- Efficient and cost effective balloon envelope seaming fabrication and inspection techniques.
- Buoyancy control methods involving no consumables to limit balloon diurnal altitude excursions or temperature/differential pressure fluctuations and/or enable altitude control needed for planetary missions.
- Autonomous precision parafoil and parachute systems for recovery of terrestrial balloooncraft and targeting of planetary probes and sondes.
- Deployment and inflation of balloon envelopes in planetary atmospheres.
- Latitude trajectory control for altering balloon trajectories to avoid overflight of no-fly zones on earth and enable global reconnaissance of the planets.
- Innovative balloon design concepts for including zero-pressure, superpressure, Montgolfere and reversible fluid balloons.
- Techniques for contamination and sterilization of planetary balloon materials to meet planetary protection requirements.

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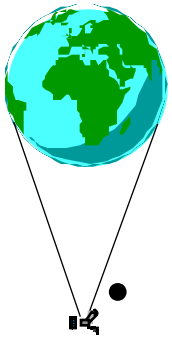
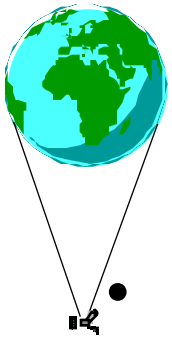


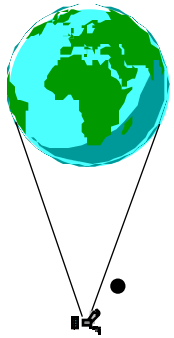
Firm/Organization Eligibility

- SBIR
  - Small Business Concern
    - Independently owned and operated
    - More than 51 percent U.S. owned
    - Organized for profit
    - Less than 500 employees including affiliates, etc.
    - Principal investigator must have primary employment with the small business at the time of award and during contract
- STTR
  - Small Business Concern - same as SBIR
  - Research Institutions
    - Federally Funded Research and Development Centers (FFRDC)
    - Nonprofit College or University
    - Nonprofit Research Institutions



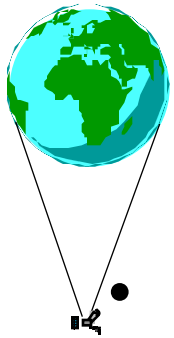
Features of NASA SBIR Program

- Annual Program Solicitation encompasses
  - All NASA programs in aeronautics and space
  - 28 major technical topics, 118 subtopics in 1997
- Field Centers develop and recommend subtopics; finalized by HQ
- Uniform procedures for evaluation and recommendations by NASA Centers
- Final selections made by NASA HQ
- Centers award and monitor contracts
- NASA uses contracts, not grants, for Phase I and II awards



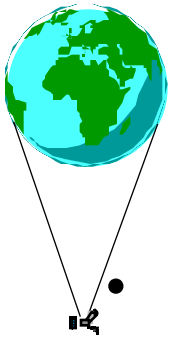
Small Business Technology Transfer Program

- Similar to SBIR but requires cooperative research by:
  - Small Business Concern (SBC) and,
  - Nonprofit Research Institution (RI) (universities, FFRDCs, federal labs)
- SBC (contractor) must perform at least 40% of R&D
- RI (subcontractor) must perform at least 30% of R&D
- Principal Investigators do not need to be employed by small business
- STTR Phase I — $100K (1 year, maximum), Phase II — $500K (2 years, maximum)



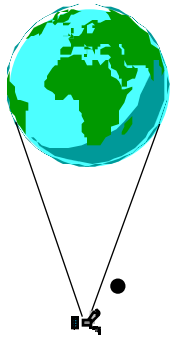
SBIR/STTR Program Structure Phase I

- To determine the technical feasibility of ideas submitted in response to SBIR/STTR program solicitations
- To determine quality of contractor's abilities
- Fixed price funding agreements for six months (STTR: one year)
- NASA funding limits; SBIR: $70 K, STTR: $100K
- Competitive selection process in response to an agency's solicitation (no unsolicited proposals accepted)



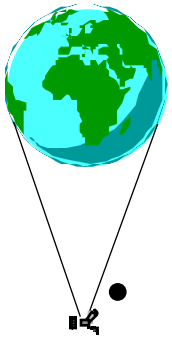
SBIR/STTR Program Structure Phase II

- To pursue development of promising Phase I projects
- Funding agreements: up to two years
- NASA funding limits: SBIR: $600K, STTR: $500K
- Only the agency's Phase I performers are eligible for Phase II
- Competitive selection based on uniform evaluation criteria
- Commercial potential is a significant factor
- Contractors own resulting intellectual property (data, copyrights, patents, etc.)
- Government has royalty-free rights for government use of intellectual property
- Government protects data from public dissemination for four years after contract ends



SBIR/STTR Program Structure Phase III

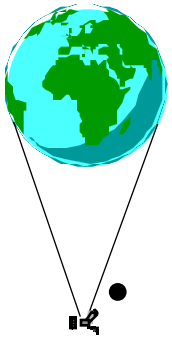
- To pursue commercial applications, using non-federal capital; and/or
- For follow-on, non-SBIR/STTR funded contracts with a federal agency for products or processes intended for use by the U.S. Government
- Phase III contracts can be awarded without further competition
  - Must pursue Phase II thesis or product
  - Must use non-SBIR/STTR funds
  - May be initiated any time after Phase II proof-of-thesis
  - No justification for other than full and open competition (JOFOC) required
  - Must use new contract number
  - No percentage to small business or research institution requirement



Opportunities for Academic Institutions in SBIR and STTR

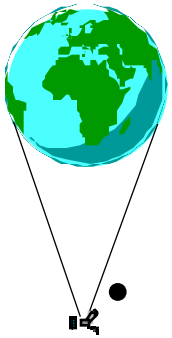
- As Sub Contractors to Small Business Concern:
  - SBIR - Per cent technical effort
    - Up to one-third in Phase I
    - Up to one-half in Phase II
  - STTR - From 30 to 60 per cent of technical effort
- A written cooperative agreement between Small Business Concern and Research Institution (*) is required with all STTR proposals

* University, federally funded research and development center, or a non-profit research institution



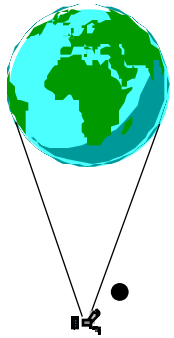
Large Business Participation in SBIR and STTR

- Small Business Concern (SBC) subcontracting relationships with Large Business Concerns (LBC's) are permitted. Limitations exist on the extent of participation:
  - SBIR:
    - Maximum of 33% of work in Phase I
    - Maximum of 50% of work in Phase II
  - STTR:
    - Maximum of 30% of work in Phase I
    - Maximum of 30% of work in Phase II



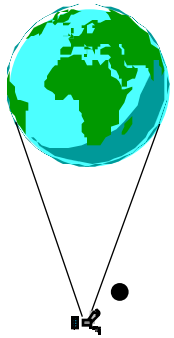
Large Business Participation in SBIR and STTR (continued)

- Strategic Partnerships
  - Joint ventures and limited partnerships are permitted provided the entity created qualifies as a small business. Some minor limitations apply:
  - Independently owned and operated for profit
    - 51% ownership or voting stock held by US citizens or legal resident aliens
    - Less than 500 employees
    - No more than 49% participation by foreign business entities
  - A copy or detailed summary of the agreement should be provided in any proposal



What NASA Does Not Support Through SBIR?

- Routine engineering design, development, or analysis (contract, engineering, or body-shopping)
- System studies, literature searches, marketing surveys
- Studies to identify a problem or potential approaches to its solution
- Financial support for commercial development of an existing product or patent



What Does NASA Want in an SBIR/STTR Proposal?

- Innovative approaches to solve stated NASA problems — or to exploit new opportunities
- High-risk, high-payoff R&D
- Innovations responsive to the subtopic to which submitted
- Innovations which contribute to the NASA mission and which also have potential commercial applications
- Small businesses serious about commercial business development